

REMARKS

Claims 19-36 are pending and under current examination. In the Office Action¹, the Examiner rejected claims 19-36 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,667,301 to Chiu et al. ("Chiu"). Applicants respectfully traverse the rejection for the reasons that follow.

Rejection of Claims 19-36 under 35 U.S.C. § 102(b):

Applicants request reconsideration and withdrawal of the rejection of claims 19-36 under 35 U.S.C. § 102(b) as being anticipated by Chiu. In order to establish anticipation under 35 U.S.C. § 102, the Examiner must show that each and every element as set forth in the claim is found, either expressly or inherently described, in Chiu. See M.P.E.P. § 2131. Chiu, however, does not disclose each and every element of Applicants' claims 19-36. Chiu does not disclose at least Applicants' claimed "said true random generator being arranged to generate a random sequence of bits having variable rate" and "said generator of the alteration signal being connected so as to receive said seed and generate said alteration signal by processing said seed by means of the sequence generated by said pseudo-random number generator," as recited in claim 19. Moreover, Chiu does not disclose at least "obtaining the random seeds from a random sequence of bits having variable rate" and "thereby obtaining in said interval multiple pseudo-random sequences of random lengths shorter than the lengths determined by the arrival of two subsequent seeds," as recited in claim 30.

¹ The Office Action contains statements characterizing the related art and the claims. Regardless of whether any such statements are specifically identified herein, Applicants decline to automatically subscribe to any statements in the Office Action.

Chiu does disclose that “[t]he number of bits of the intermediate product is then reduced to that specified for each PRN through an inverse transform network, thereby forming a new PRN.” Chiu, Abstract. As the discussion in Chiu, col. 4, lines 24-43 indicates, this transform and inverse transform are changing the length of the multiplicands representation. That is, the multiplicands may have a variable length. This does not, however, teach Applicants’ claimed “said true random generator being arranged to generate a random sequence of bits having variable rate” (claim 19, emphasis added). Further, Chiu does not disclose using a true random number generator at all. Chiu instead discloses “[t]he generation process is initiated with a starting number Z_0 , also known as a seed.” Chiu, col. 2, lines 47-48. Even if Z_0 could be a true random seed, this does not necessarily disclose a true random number generator.

In FIG. 3, Chiu discloses a system for parallel generation of multiple pseudo-random numbers. See Chiu, col. 7, lines 25-56 and FIG. 3. FIG. 5 shows a system that achieves the same result as the system of FIG. 3 while costing less. See Chiu, col. 8, lines 1-2, 13-22 and FIG. 5. FIG. 5 requires the use of a systolic counter and a multiplexer. FIG. 6 illustrates a more detailed system for accomplishing the processing of FIG. 5. See Chiu, col. 8, line 23 through col. 9, line 12 and FIG. 6. The system illustrated in FIG. 6 includes a multiplexer for directing particular results to the appropriate register locations, a register controller for ensuring correct storage in the register, a main controller for controlling the beginning and ending of the random number generation process, and a systolic controller for aiding the multiplication. See Chiu, col. 8, line 23 through col. 9, line 12 and FIG. 6. These components all interact to correctly process the multiplication necessary for computing a pseudo-random number.

However, they do not “generate said alteration signal by processing said seed by means of the sequence generated by said pseudo-random number generator,” as recited in Applicants’ claim 19.

By the reasoning above, claim 19 should be allowable over Chiu. Dependent claims 20-29 should also be allowable at least due to their respective dependence from base claim 19.

Regarding claims 30-36, Chiu does not disclose at least Applicants’ claimed “obtaining the random seeds from a random sequence of bits having variable rate” and “thereby obtaining in said interval multiple pseudo-random sequences of random lengths shorter than the lengths determined by the arrival of two subsequent seeds,” as recited in claim 30.

The Examiner cited to the Abstract of Chiu as teaching “obtaining the random seeds from a random sequence of bits having variable rate.” See Office Action, pg. 8. As discussed above, the text from the Abstract that was cited by the Examiner may teach a sequence of bits having a variable length, but does not teach a sequence of bits having variable rate. Further, the Examiner incorrectly characterized Chiu when he alleged that Chiu discloses “thereby obtaining in said interval multiple pseudo-random sequences of random lengths shorter than the lengths determined by the arrival of two subsequent seeds.” Office Action, p. 9. The Examiner cited FIG. 4 as teaching this claim limitation. According to Chiu, however, “FIG. 4 is a layout of the internal multiplication part for one single bit of the intermediate product.” That is, FIG. 4 shows a multiplier for a single bit of the calculation of the pseudo-random number. Therefore, Chiu may teach obtaining a pseudo-random sequence of a shorter length than the entire pseudo-random sequence to be computed, where the length of the shorter

sequence is a fixed length determined by the processing hardware (e.g. the length is fixed at a single bit length). However, FIG. 4 does not teach Applicants' claimed "thereby obtaining in said interval multiple pseudo-random sequences of random lengths shorter than the lengths determined by the arrival of two subsequent seeds" (claim 30, emphasis added).

By the reasoning above, claim 30 should be allowable over Chiu. Dependent claims 31-36 should also be allowable at least due to their respective dependence from base claim 30.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 102(b) rejection of claims 19-36.

Conclusion:

Applicants request reconsideration of the application and withdrawal of the rejection. Pending claims 19-36 are in condition for allowance, and Applicants request a favorable action.

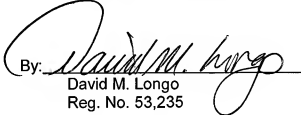
If there are any remaining issues or misunderstandings, Applicants request the Examiner telephone the undersigned representative to discuss them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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